

## SUPPORT CAPACITY

<p><b>5.2</b> The school district will ensure that their schools have an integrated, secure network infrastructure with dynamic bandwidth capacity to support fully converged networks that allow for communication, data collection and distribution, and distance learning.</p>	<ul style="list-style-type: none"> <li>A. Communicate in the district technology plan a vision for multimedia infrastructure designed to support instruction</li> <li>B. Establish a system for identifying, specifying, prioritizing, and managing equipment for multimedia development in direct support of curricular and professional development objectives</li> <li>C. Ensure the installation, maintenance, and support of multimedia-capable teacher stations in classrooms including data projectors to support large-group instruction</li> <li>D. Research and implement an integrated network infrastructure capable of utilizing all distribution modules</li> <li>E. Use bundled distribution packages as a primary means of distribution to manage fully converged networks</li> <li>F. Install and maintain networks, virus protection, and Internet filtering according to industry standards by implementing systemic, state-of-the-art network security tools at all levels of access to LANs, WANs, and other networks</li> <li>G. Assess LAN/WAN technology currently implemented to determine SNMP (simple network management protocol) compliance</li> <li>H. Implement a district network management tool that performs automated software installation</li> </ul>
<p><b>5.3</b> The school district will have qualified technical staff, including one networking engineer per WAN or per ten LANs, one networking technician per LAN, and one end-user support technician per every five hundred users.</p>	<ul style="list-style-type: none"> <li>A. Develop minimum staffing requirements and job descriptions, with a state-guided salary schedule, for the positions of networking engineer, networking technician, educational technology director, and support technician</li> </ul>

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<b>5.4</b> The school district will implement a disaster recovery plan for all points of failure in LANs and WANs, including redundant data storage, robust automated backup, and immediate hardware recovery.	<ul style="list-style-type: none"><li>A. Ensure that disaster recovery plans are included in the district technology plan</li><li>B. Ensure that schools will have electrical distribution systems that provide isolated circuits in all classrooms and redundant power sources for mission-critical equipment</li><li>C. Implement a district management application that monitors bandwidth on the LAN and WAN and provides network failure alarms that can be accessed remotely</li></ul>
<b>5.5</b> The school district will implement an obsolescence and upgrade plan to replace and recycle equipment and software.	Ensure that the obsolescence and upgrade plans are included in the district technology plan
<b>5.6</b> The school district will increase their ability to design Web pages and Web-based instruction that are accessible to students and staff with special needs in accordance with Section 508 of the Rehabilitation Act of 1973 as amended by the Workforce Improvement Act of 1998.	Provide training in basic Web page accessibility principles to staff, teachers—and, when appropriate, students—who design Web pages as part of the curriculum

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**II. ACTION LIST**

- District should have access to a database with a complete technology inventory, including assistive technology, showing the type of equipment/device, its location, its use, peripherals to which it has access, applications to which it has access, and other relevant information.
- District should maintain a needs-assessment document showing technology-based resources and applications required to address the mission of the district, including networking, hardware/devices, and software applications as well as assistive technology.
- District should include in their local budgets line items for technology, including assistive technology, with sufficient funding to implement the designated strategies.
- District should publish a procedure for the perpetual review of equipment used in multimedia development processes. Reviews should quantify equipment and processes by their impact on teaching and learning.
- District should maintain a strategic plan for acquiring and implementing technology, including assistive technology, for universal access to network resources. This document should show the strategies for addressing the identified needs, the persons responsible for addressing and completing each strategy, and the resources/funds necessary to fully implement the strategies.
- District technology plans should include a strategic vision for building a multimedia infrastructure to support instruction.
- District technology plans should include a disaster recovery plan.
- District technology plans should include an obsolescence and upgrade plan, including strategies to refurbish, resell, recycle, or donate obsolete devices.
- District policies outlined in district technology plans should include security accountability, virus protection, and Internet filtering guidelines.
- District technology plans should provide for outlets and amperage and for meeting industry standards and building codes.
- The district should use professional discussion groups to share the results of their research about the implementation of integrated network infrastructures and bundled distribution practices.
- The district should have records to show that they have assessed their current LAN/WAN technology.
- District network managers should provide the district office with quarterly reports of statistics on bandwidth utilization.
- The district should ensure that new school construction provides for isolated power in each classroom, computer lab, telecommunications closet, and work area.
- The district should provide UPS (uninterruptible power supply) systems for all critical equipment.

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- The district should use the minimum staffing and salary requirements for the positions specified in objective 4.3.
- The district should have a network manager in place.
- District staff, teachers, and students should be aware of basic Web accessibility guidelines when designing Web pages.
- The district should designate a Web accessibility resource person to coordinate training and information sharing among district personnel.

**DISTRICT**

- Maintain technology inventories, including assistive technology
- Conduct needs assessments to identify required technology, including assistive technology
- Create a strategic technology plan that includes strategies for acquiring, managing, and implementing required technology, including assistive technology
- Implement a district disaster recovery plan and an obsolescence and upgrade plan
- Seek funding from local, state, and federal sources
- Encourage and publicize flexible access schedules
- Create a vision for a multimedia infrastructure
- Encourage schools to provide multimedia-capable workstations
- Research and implement an integrated network infrastructure
- Use bundled distribution packages to manage fully converged networks
- Install and maintain secure networks
- Employ staff for adequate network maintenance and support
- Implement a district management application that monitors bandwidth on the LAN and WAN
- Ensure that schools have adequate electrical distribution systems
- Publish procedures and schedules for review of equipment and software used in multimedia development including rubrics for judging impact on teaching and learning
- Provide schools with the necessary guidance and training in creating Web pages to ensure that electronic information is accessible to students and teachers with special needs

**SCHOOLS**

- Create a strategic technology plan that includes strategies for acquiring and implementing required technology, including assistive technology
- Seek funding from local, state, and federal sources
- Create flexible schedules for access to technology
- Provide multimedia-capable workstations
- Install and maintain secure networks
- Employ staff for adequate network maintenance and support
- Provide adequate electrical distribution systems

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**IV FUNDING CONSIDERATIONS****SDE**

- Technical assistance for the district in developing updated technology plans
- Total cost of ownership (TCO) calculation to determine the allocation per student per year necessary to keep the pace with the need for access to network resources [Consortium for School Networking's TCO tool available on-line at <http://www.classroomtco.org>]
- Upgraded technology inventory reporting system

**DISTRICT**

- Total cost of ownership (TCO) calculation to determine the allocation per student per year necessary to keep the pace with the need for access to network resources [Consortium for School Networking's TCO tool available on-line at <http://www.classroomtco.org>]
- Technology committee meetings to develop products such as the multimedia infrastructure plan and the disaster recovery plan
- Materials to publish an updated technology plan
- Multimedia teacher workstations including data projectors
- Hardware and software to secure all LANs and WANs to comply with district, state, and industry standards
- Technology director, networking engineer, and networking technician
- Equipment inventory assessment program
- Isolated circuit plan
- Support planning
- Technology needs assessments and surveys

**SCHOOLS**

- Total cost of ownership (TCO) calculation to determine the allocation per student per year necessary to keep the pace with the need for access to network resources [Consortium for School Networking's TCO tool available on-line at <http://www.classroomtco.org>]
- Technology committee meetings to develop products such as the multimedia infrastructure plan and the disaster recovery plan
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- Support planning
- Technology needs assessments and surveys



## SUPPORT CAPACITY

## V. EVALUATION

Objectives	Possible Baseline Data	Possible Data Sources to Be Used for Ongoing Evaluation and End-of-Program Report	Outcomes (Include "action list" items achieved.)				
			JAN. 2008	JAN. 2009	JAN. 2010	JAN. 2011	JAN. 2012
<b>5.1</b> The school district will ensure that all students, including those with special needs, and teachers have access to electronic information resources.	<ul style="list-style-type: none"> <li>Statewide achievement test scores</li> <li>District report cards</li> <li>Professional development tracking and surveys</li> <li>District, school, and community surveys</li> <li>School technology and improvement plans</li> <li>Documented access to technology resources</li> <li>Technology needs assessments</li> <li>SDE Technology Counts on-line survey</li> <li>Budget data</li> <li>State personnel reports</li> </ul>	<ul style="list-style-type: none"> <li>Statewide achievement test scores</li> <li>District report cards</li> <li>Professional development tracking and surveys</li> <li>Observations and interviews</li> <li>Documented access to technology resources</li> <li>District, school, and community surveys</li> <li>School technology and improvement plans</li> <li>Documented access to technology resources</li> <li>Technology needs assessments</li> <li>SDE Technology Counts on-line survey</li> <li>Budget data</li> <li>State personnel reports</li> </ul>					
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<b>5.3</b> The school district will have qualified technical staff, including one networking engineer per WAN or per ten LANs, one networking technician per LAN, and one end-user support technician per every five hundred users.							
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<b>5.6</b> The school district will increase their ability to design Web pages and Web-based instruction that are accessible to students and staff with special needs in accordance with Section 508 of the Rehabilitation Act of 1973 as amended by the Workforce Improvement Act of 1998.							
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## **CUMULATIVE TARGETS AND BENCHMARKS**

The targets and benchmarks will be monitored and adjusted annually by the Superintendent of Operations and Technology Director with input from the District Administrative Staff and School Board.

### **2008-2011**

#### **Learners and Their Environment**

- All computer labs in the district will be updated to allow for testing and instructional upgrades
- All labs will be equipped with re-boot and restore technology.

#### **Professional Capacity**

- District teachers will possess technology proficiency as evidenced by teacher technology proficiency assurance forms.
- The district will have a technology coach who trains teachers and visits classrooms to help teachers integrate technology into the curriculum.
- Each School will develop a plan for an assistive technology coach who trains teachers and visits classrooms to help teachers integrate assistive technology into the curriculum.
- Each schools will develop an assistive technology assessment team that coordinates assistive technology assessments for students with special needs.

#### **Instructional Capacity**

- Each school will integrate technology and information literacy skills into their teaching of the South Carolina academic standards as evidenced by the technology proficiency assurance forms and teacher portfolios.
- Students will work to meet the information literacy and technology skills for their grade level as found on the SDE's performance matrix for information literacy and technology education.

#### **Community Connections**

- The district will report a 10 percent yearly increase in community collaborations that result in better teacher and student access to technology, better teacher and student use of technology, more teacher and student real-world experiences in technology-related fields, more research and evaluation of technology projects, and more community collaboration technology grants submitted and dollars funded.
- The districts will work toward a community partnership that provides research and evaluation for a district and community wide technology projects.
- The district will work to provide a K-12 educational portal that lists willing community participants and partners who can provide services to supplement the curriculum.
- The district will work toward providing access to technology-related facilities after hours for parents, teachers, and community members.

#### **Support Capacity**

- The school districts will include in their technology plans an assessment of their current technology needs, their current technology inventory, and their current technology support strategies.

### **2009-2011**



### **Learners and Their Environment**

- The School District will have created technology portfolios documenting their acquisition of grade-level-appropriate competencies as well as their use of a variety of technology tools to complete authentic tasks.
- The district will possess effective communication skills and technology literacy as evidenced by teacher and student technology portfolios and by presentations at technology conferences and fairs.
- A Technology replacement cycle of 3 to 5 years will be included in the districts Operational budget.
- An operational help desk will be staffed. For prompt teacher, student and community support on district technology.

### **Professional Capacity**

- Every teacher will demonstrate proficiency by maintaining teacher and student technology portfolios, keeping a journal of course experiences, interacting with the school technology coach, and integrating technology into the curriculum to teach the state curriculum standards.
- Each school will have a technology coach who will train teachers and visits classrooms to help teachers integrate technology into the curriculum.
- The district will provide an assistive technology coach who will train teachers and visits classrooms to help teachers integrate assistive technology into the curriculum.
- Each school will have an assistive technology assessment team that coordinates assistive technology assessments for students with special needs.

### **Instructional Capacity**

- Each teacher will integrate technology and information literacy skills into their teaching of the South Carolina academic standards as evidenced by the technology proficiency assurance forms and teacher portfolios.
- Seventy percent of students will meet the information literacy and technology skills for their grade level as found on the SDE's performance matrix for information literacy and technology education.

### **Community Connections**

- The district will have reported a yearly increase in community collaborations that result in better teacher and student access to technology, better teacher and student use of technology, more teacher and student real-world experiences in technology-related fields, more research and evaluation of technology projects, and more community collaboration technology grants submitted and dollars funded.
- The districts will have developed a community partnership that provides research and evaluation for a district and community technology projects.
- The district will have provided a K-12 educational portal that lists willing community participants and partners who can provide services to supplement the curriculum.
- The district will have provided access to technology-related facilities after hours for parents, teachers, and community members.

### **Support Capacity**

- The district will include in their technology plans an assessment of their current technology needs, their current technology inventory, and their current technology support strategies.
- The district will provide the teachers and students with current hardware and software technology to meet the state mandated goals.

## Acknowledgements

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	-	Jim Barton	
	-	Steve Floyd	
	-	Donna Jackson	
	-	Edna McGee	
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